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**Egg Drop Project: Pre-drop Analysis**

Materials Used:

* wooden rods
* rubber-bands
* duck-tape

Our device will work in terms of impulse and momentum by maximizing the amount of time it takes for the egg to slow down and by minimizing the forces acting on the egg. The equation impulse equals force multiplied by the change in time (Impulse = F∆t) tells us that the more time the impact takes the less force the egg will feel. For example, when an egg is thrown at a sheet the impact time is larger and the egg does not break, but when the egg is thrown at a wall the impact time is shorter and the egg breaks. One of the major components of our device is the square wooden frame. When our device hits the ground, the force will be spread out into the four upright beams. This will make it so less force is felt by the egg. The other major component of our device are the rubber bands attaching to the egg holder. These will stretch when the structure hits the ground, allowing the egg to slow down over a longer period of time, therefore maximizing the time of impact and minimizing the forces acting upon the egg.